DRAFT

Fire Regime Condition Class (FRCC) Interagency Handbook Reference Conditions

Modeler: Bruce Davenport **Date: 4/23/04** **PNVG Code: MMHF**

Potential Natural Vegetation Group: Mixed Mesophytic Hardwood Forest

Geographic Area: Occupies suitable sites on areas corresponding to Kuchler types 103 and 104. The described area for Kuchler type 103 generally includes the Cumberland Plateau and Cumberland Mountains physiographic sections, as well as, parts of the Allegheny Mountains and Unglaciated Allegheny Plateau sections. Type 104 includes large portions of the Ridge and Valley and Blue Ridge provinces. Occurrence for both Kuchler types includes the states of Alabama, Tennessee, Kentucky, as well as Virginia, West Virginia, Ohio, and Pennsylvania; Georgia, North Carolina and South Carolina.

Description: Mixed mesophytic forest communities, true mesic and "cove" hardwoods, are often cited as the most biologically diverse ecosystems in the United States, containing as many as 30 canopy tree species. Generally confined to lower north and east facing slopes or mesic coves below 5,000 feet in the mountains, they may occupy the entire landscape on gentler terrain where conditions are suitable. Although species dominance, or "association segregates," vary with location and conditions, characteristic tree species include: sugar maple, beech, hemlock, silverbell, yellow poplar, red maple, white ash, white oak, northern red oak, yellow birch, yellow buckeye, and basswood.

Fire Regime Description: Fire Regime Group III, infrequent, primarily low intensity surface fire with rare mosaic or replacement fire. Mean fire return interval (MFI) is about 50 years with wide year-to-year and within-type variation related to moisture cycles, degree of sheltering, and proximity to more fire-prone types. Anthropogenic fire considered and further contributes to within-type MFI variation.

Vegetation Type and Structure

Class*	Percent of Landscape	Description
A: post replacement	5	0-10 years. Sprouts, seedlings, saplings, primarily of major overstory species in gaps created by wind, lightning, insect/disease, and less frequently, fire. Intolerant species (e.g., PRSE, LITU) confined to multiple-tree gaps.
B: mid-seral closed	25	10–79 years. Dominated by young to early mature canopy with some obligate mid and understory species. Set B/C break at 90%. Open/closed condition a function of understory/midstory development more than canopy closure. At least two layers in closed dependent on age.
C: mid- seral open	3	10-79 years. Same overstory as B but without well-developed midstory and with a generally low or minimal understory.
D: late- seral open	27	80-200+ years. Early to late mature canopy that may exceed 100 feet in height. Dominant overstory species variable by location and stand history. D/E break 90%. Open/closed more dependent on presence or absence of muti-layered vertical structure. Closed with single-layer main canopy without continuous midstory or robust understory.
E: late- seral closed	40	80-200+ years. Same canopy as D with well developed lower layers containing canopy species and often others confined at

those levels.

Total	100

*Formal codes for classes A-E are: AESP, BMSC, CMSO, DLSO, and ELSC, respectively.

Fire Frequency and Severity

Fire Severity	Fire Frequency (yrs)	Probability	Percent, All Fires	Description
Replacement Fire	800	0.001	5	
Non-Replacement Fire	55	0.019	95	
All Fire Frequency*	50	0.020	100	

*All Fire Probability = sum of replacement fire and non-replacement fire probabilities. All Fire Fire Frequency = inverse of all fire probability (previous calculation).

References

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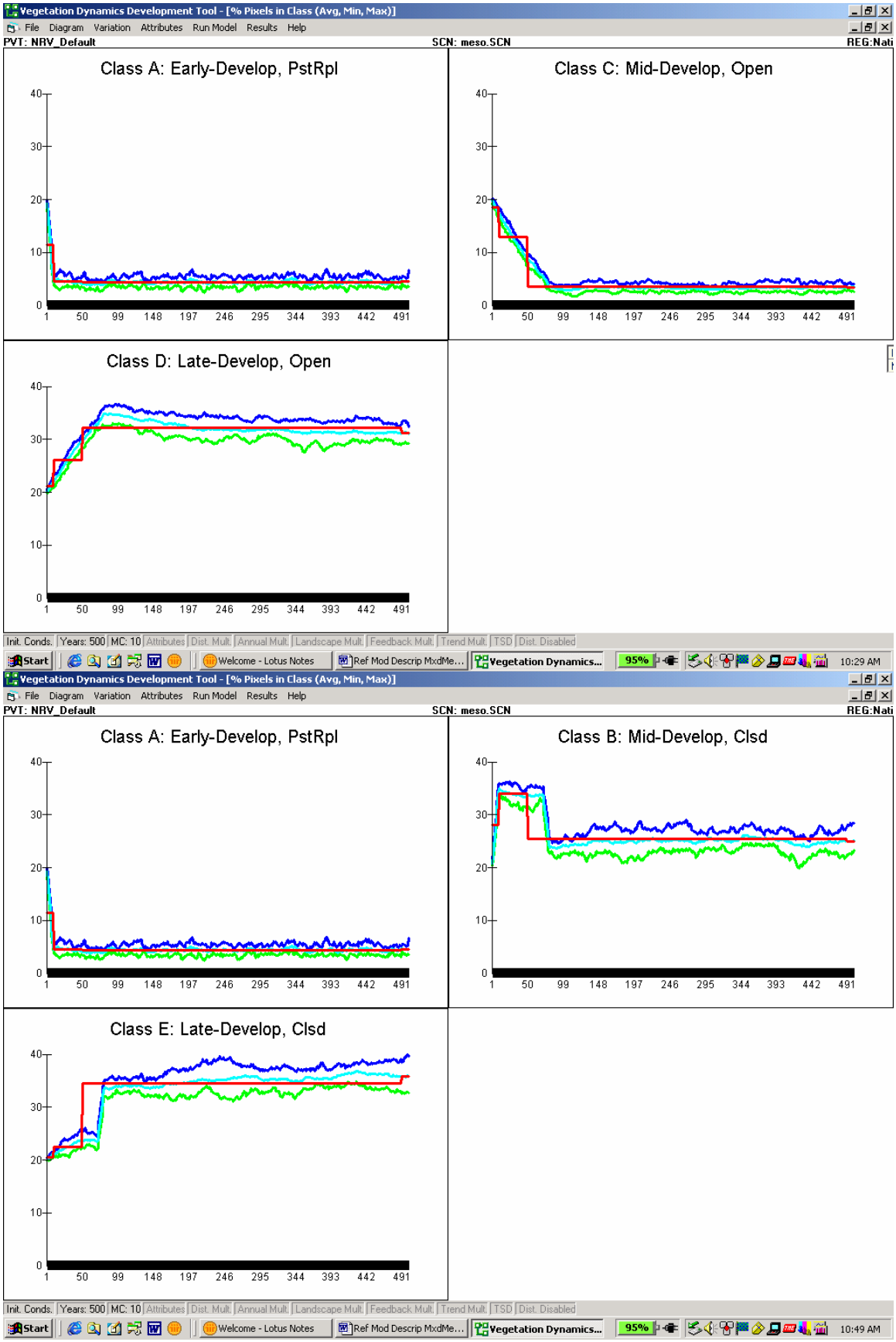
VDDT File Documentation: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REG:Nati
Class A: Early-Develop, PstRpl
Class C: Mid-Develop, Open
Class D: Late-Develop, Open
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Class E: Late-Develop, Clsd
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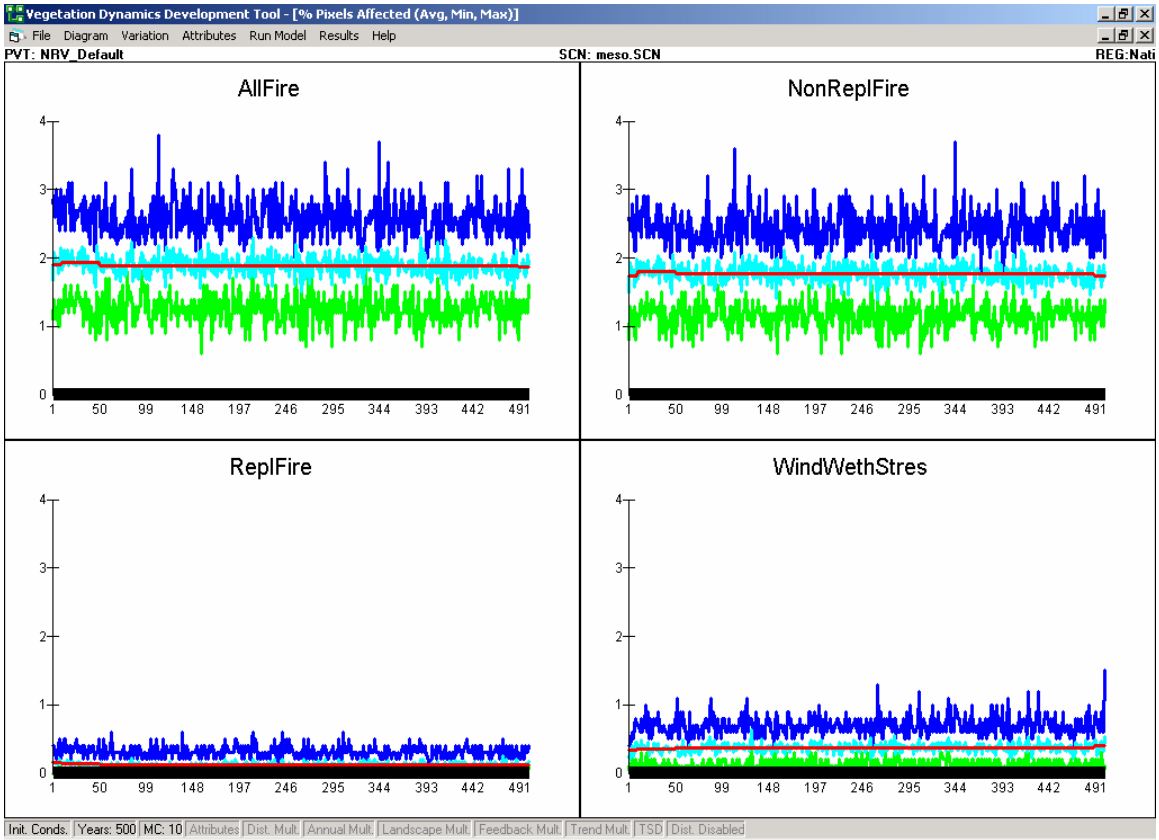
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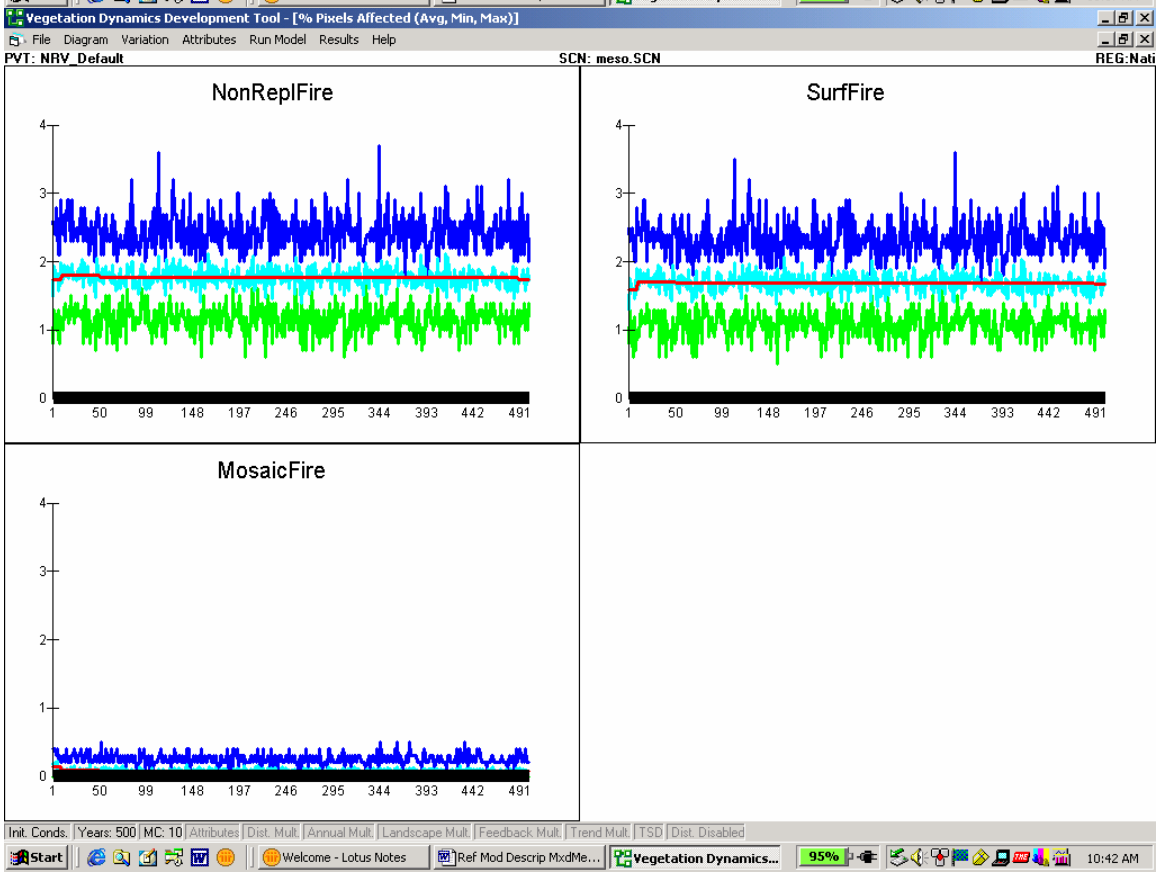
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SurfFire
MosaicFire
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